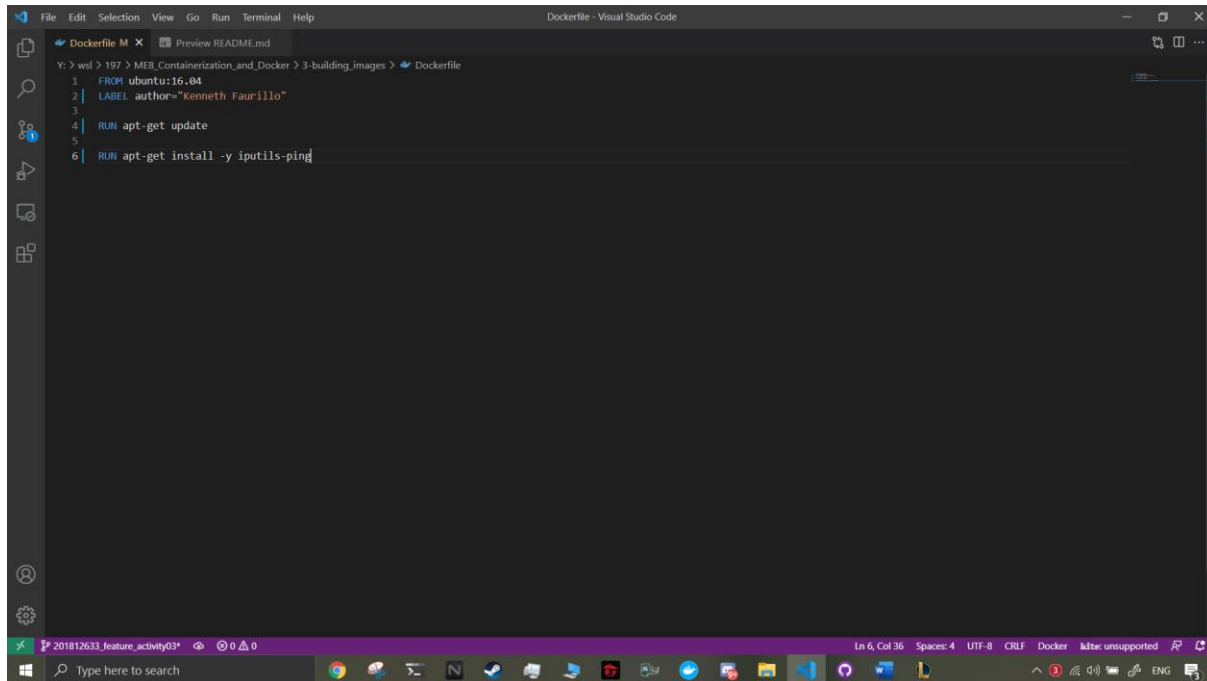


Kenneth Faurillo 201812633

ME 8: Containerization and Docker

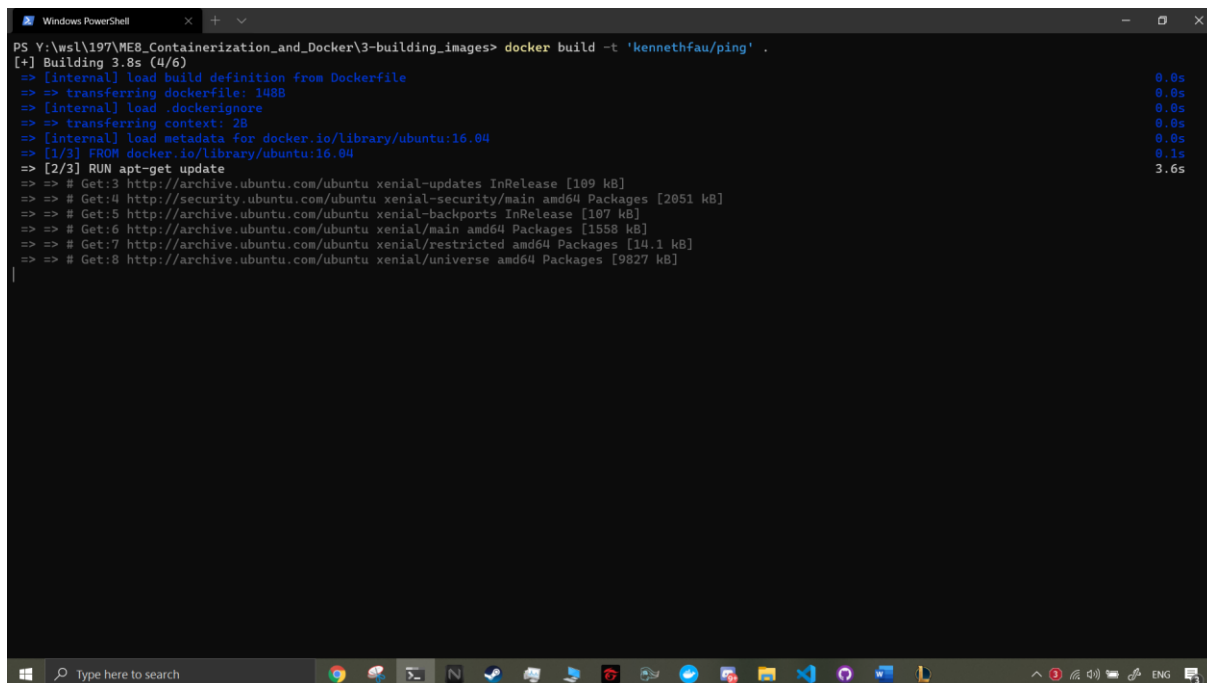
Activity 3

Created Dockerfile



```
1 FROM ubuntu:16.04
2 LABEL author="Kenneth Faurillo"
3
4 RUN apt-get update
5
6 RUN apt-get install -y iputils-ping
```

Building the image



```
PS Y:\wsl\197\ME8_Containerization_and_Docker\3-building_images> docker build -t 'kennethfau/ping' .
[+] Building 3.8s (4/6)
=> [internal] load build definition from Dockerfile
=> transferring dockerfile: 148B
=> [internal] load .dockerignore
=> transferring context: 2B
=> [internal] load metadata for docker.io/library/ubuntu:16.04
=> [1/3] FROM docker.io/library/ubuntu:16.04
=> [2/3] RUN apt-get update
=> # Get:3 http://archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
=> # Get:4 http://security.ubuntu.com/ubuntu xenial-security/main amd64 Packages [2051 kB]
=> # Get:5 http://archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
=> # Get:6 http://archive.ubuntu.com/ubuntu xenial/main amd64 Packages [1558 kB]
=> # Get:7 http://archive.ubuntu.com/ubuntu xenial/restricted amd64 Packages [14.1 kB]
=> # Get:8 http://archive.ubuntu.com/ubuntu xenial/universe amd64 Packages [9827 kB]
```

Image building finished

```
Windows PowerShell
PS Y:\wsl\197\ME8_Containerization_and_Docker\3-building_images> docker build -t 'kennethfau/ping' .
[+] Building 26.9s (7/7) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 148B                                              0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                    0.0s
=> [internal] load metadata for docker.io/library/ubuntu:16.04                  0.0s
=> [1/3] FROM docker.io/library/ubuntu:16.04                                     0.1s
=> [2/3] RUN apt-get update                                                       16.5s
=> [3/3] RUN apt-get install -y iputils-ping                                     9.7s
=> exporting to image                                                            0.3s
=> exporting layers                                                              0.3s
=> writing image sha256:66d4ccec32ad8e18af2efeb99b043155b04e18fffd592f018a45726c56a47a359 0.0s
=> naming to docker.io/kennethfau/ping                                           0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS Y:\wsl\197\ME8_Containerization_and_Docker\3-building_images> docker images
REPOSITORY          TAG             IMAGE ID         CREATED          SIZE
kennethfau/ping     latest          66d4ccec32ad    20 minutes ago   170MB
ubuntu              16.04          9ff95a467e45    5 days ago       135MB
PS Y:\wsl\197\ME8_Containerization_and_Docker\3-building_images>
```

Optimizing Dockerfile

```
Y: > wsl > 197 > ME8_Containerization_and_Docker > 3-building_images > Dockerfile
1 FROM ubuntu:16.04
2 LABEL author="Kenneth Faurillo"
3
4 RUN apt-get update \
5     && apt-get install -y iputils-ping \
6     && apt-get clean \
7     && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
8     && truncate -s 0 /var/log/*log

PS Y:\wsl\197\ME8_Containerization_and_Docker\3-building_images> docker images
REPOSITORY          TAG             IMAGE ID         CREATED          SIZE
kennethfau/ping     latest          527addefc5af    15 seconds ago   139MB
<none>              <none>          66d4ccec32ad    30 minutes ago   170MB
ubuntu              16.04          9ff95a467e45    5 days ago       135MB
PS Y:\wsl\197\ME8_Containerization_and_Docker\3-building_images>
```

A reduction of filesize from 170 MB to 139 MB !

Final Dockerfile

```
Y: > wsl > 197 > ME8_Containerization_and_Docker > 3-building_images > Dockerfile
1 FROM ubuntu:16.04
2 LABEL author="Kenneth Faurillo"
3
4 ENV PING_TARGET "google.com"
5
6 RUN apt-get update \
7     && apt-get install -y iputils-ping \
8     && apt-get clean \
9     && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
10    && truncate -s 0 /var/log/*log
11
12 CMD ["sh", "-c", "ping $PING_TARGET"]
```

Running the container automatically runs ping !

```
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS Y:\wsl\197\ME8_Containerization_and_Docker\3-building_images> docker run -it kennethfau/ping
PING google.com (142.250.207.78) 56(84) bytes of data:
64 bytes from 142.250.207.78: icmp_seq=1 ttl=37 time=31.6 ms
64 bytes from 142.250.207.78: icmp_seq=2 ttl=37 time=31.6 ms
64 bytes from 142.250.207.78: icmp_seq=3 ttl=37 time=31.5 ms
64 bytes from 142.250.207.78: icmp_seq=4 ttl=37 time=31.6 ms
64 bytes from 142.250.207.78: icmp_seq=5 ttl=37 time=31.4 ms
64 bytes from 142.250.207.78: icmp_seq=6 ttl=37 time=32.0 ms
^C
--- google.com ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5003ms
rtt min/avg/max/mdev = 31.446/31.665/32.066/0.221 ms
PS Y:\wsl\197\ME8_Containerization_and_Docker\3-building_images> |
```